Dear Sir

Madam

As stated in the introduction earlier by *Dirjen/kepala balai*……, that we are now in the Ngurah Rai grand Forest Park, a conservation area that has an area of more than 1,300 Ha.

Let's continue our journey, to see the G-20 Showcase area. This journey will cover a distance of about 150 meters, with a duration of about 30 minutes. Our first journey will start towards the ellips area, namely towards the planting area by the leaders of the G-20 delegation in 2022.

***(In the Beji Area)***

Before this Showcase area was built, the surrounding area included the temple area containing Beji. Beji is a sacred area in the temple environment, which is used for *melukat* to cleanse the mind and soul spiritually. Therefore, Beji is generally located at a water source or in the form of a pond. In the context of the Development of the Showcase area and with the approval of religious leaders (*pemangku*), the existing temple was moved to the end of nursery.

***(In the Elips Area)***

Next, we head to the area where the G-20 leaders during the G-20 site visit carried out mangrove planting activities. On our right and left, there is a mangrove planting area, which was planted ahead of the G-20 Summit. The mangroves planted on the right and left of this elliptical area are the rhizopora Mucronata type. Furthermore, in this elliptical area, there is a type of ceriops australis plant. This is one type of mangrove that is widely found on the Australian continent. While in Bali, this ceriops australis only grows in the West Bali National Park *(TN Bali Barat*), especially in the Banyu Wedang area. The heads of state during the G-20 Summit carried out mangrove planting as a symbol of their shared spirit in overcoming global climate change. The type planted by the Heads of State is the Rhizopora Mucronata type, which is one type of mangrove that grows abundantly in the middle zone.

if you wish, we like to invite you to take a group photo behind the plants that have been planted by the heads of state.

Mangrove greeting pose and spirit greeting.

***(In the Tracking Area)***

Ladies and gentlemen, next let us continue our journey to the mangrove rehabilitation area through 100m of wooden tracking.

In the mangrove forest area,

Before 1990, the mangrove forest area in Benoa Bay was a protected forest area which at that time there was a part of the area managed for other uses by the private sector, including being used for fish and shrimp farming activities. After going through an evaluation, this utilization practice was considered environmentally unfriendly and must be stopped. Therefore, after this utilization was stopped, efforts to restore the Benoa Bay protected forest began, including planting mangroves as part of forest rehabilitation by the Ministry of Forestry and the Bali Provincial Government.

In 1992, the Japanese Government, in this case JICA (*Japan International Cooperation Agency*), was interested in supporting this activity, and began to support efforts to accelerate the rehabilitation of mangrove forests massively until 1998. This forest rehabilitation cooperation succeeded in rebuilding 256 Ha of mangrove forests in Benoa Bay. Some of the results of this rehabilitation, in the area to our left, we can see in the area of rhizopora mucronata plants that are planted at regular distances. While on the right, is an area of natural plants that grow and are well maintained.

The rhizopora mucronata plants resulting from rehabilitation on our left and right with roots that appear to grip from top to bottom, are more than 30 years old. While on our right, there is a natural mangrove, namely the soneratia/avicenia type which has its own characteristics, namely with breathing roots that are shaped like pencils that rise upwards.

***(In the Open Growth Area)***

This area is a place to strengthen seedlings before they are ready to be planted in the field, which consists of 24 segment each contains of 18 beds so in total we have 432 beds and can accommodate 1.8 million mangrove seedlings. In this area, automatic watering has been carried out, namely 2 times a day for 4 hours. The water used is brackish water, which is pumped from the end of the estuary dam sluice gate, and is channeled to the beds in this open growth area.

In this open growth area, mangrove species with viviparous seed types (seeds that have germinated on trees) such as Rhizopora and Bruguiera can be directly seeded in seed beds. While mangrove species with cryptoviviparous seed types, such as soneratia, avicenia, xylocarpus, etc., must be seedes first in a germination house.

For viviparous mangrove species, they are ready to be planted in the field after more than 3 months, while cryptoviviparous mangrove species can be moved to the field after more than 2 months.

You are welcome to take a group photo in the OGA area.

## ***(In the* Germination House*)***

Next, the journey to the Germination House,

Germination house or special facility designed to grow cryptoviviparous mangrove seeds or seedlings into seedlings, which are then transferred to the next area for further growth.

This germination house has a capacity of up to 60,000 seeds, with automatic watering using sprinkles. The water will automatically work when needed either periodically (every 4 hours or because of the temperature level in the GH). The water used has used brackish water.

The planting medium used in the polytube here is a mixture of cocopeat. We have been using cocopeat planting media for more than 3 years, with quite good results for rooting mangrove seeds. The time required for the seeds to be ready to be moved to the open growth area is around 1 to 2 months.

Shown here, the ceriops and avicenia ..type of mangrove.

You are welcome to take photos at the GH, you can hold the polytube

***(In the Production House)***

The production house in this nursery is a facility used to prepare media for seeds, insert planting media into polybags and/or polytubes, and insert cryptoviviparous seeds (soneratia, avicenia) into polytubes.

The media used for polytubes uses fine cocopeat. Cocopeat is an organic planting medium made from coconut fiber powder, which has nutrients (K, P, Ca, Mg, Na) that are good for the growth of plant seeds, and is able to store higher water content compared to other planting media. While the media for polybags uses soil mixed with other things such as cocopeat and manure.

On this table, you can see several examples of mangrove seeds/seedlings. Mangroves, in addition to having ecological benefits, also have non-timber benefits (non-timber products). Of these types, there are types of mangroves that have benefits for non-timber forest products, including:

a. Avicenia Marina/ api-api, the fruit of this type of avicenia can be processed into flour to make various foods such as cakes, dodol, chips, cheese sticks, etc. The leaves of this avicenia marina are also popular with livestock such as cows, goats, buffaloes, etc.

b. Soneratia Caseolaris/ pidada, the fruit of this type of mangrove can be used to make mangrove syrup with a high vitamin C content. While the use of other HHBK, is the bark can be used as one of the fabric dyes.

c. Rhizopora Mucronata, the fruit can be made into a mixture of coffee, and also wine. While the leaves can be made as a natural fabric dye.

d. Xylocarpus Granatum, this type has unique fruit characteristics like grenades/balls. This fruit is commonly used for traditional children's games, such as assembling puzzles. In addition, several universities have studied the benefits of this fruit, that this fruit has high potential to be processed into biodiesel/biofuel with a yield of up to 30%. With an area of more than 3 million hectares of Indonesian mangrove forests, if developed, it will be an extraordinary potential that can certainly support the government's priority program in FEW Nexus. In some places, this xylocarpus fruit is used for traditional cold powder.

In order to support new renewable energy, the electricity needs for the operation of this nursery, we have used solar panels, with a capacity of 10 Kw. This solar panel is installed on the roof of the production house.

***(End Of Mangrove Showcase Tour)***

Thus our explanation regarding the operation of the G-20 showcase mangrove nursery. Hopefully the information we provide can be useful for all of us.